

OZONE FACT SHEET

What is Ozone?

Ozone is an odorless, colorless, highly reactive gas. It is the main component of the air pollution often referred to as "smog". At ground level where we breathe, ozone at high concentrations is a harmful pollutant. In contrast, ozone in the upper atmosphere is beneficial, because it blocks the sun's ultraviolet rays. Efforts to protect the environment seek to reduce ground level ozone and preserve ozone in the upper atmosphere.

How is Ozone Harmful?

High concentrations of ozone can irritate the nose, throat and lungs and constrict the airways, as well as aggravate other respiratory conditions such as asthma, bronchitis and emphysema. Long-term exposure can permanently damage lung tissue. Children, seniors and people with respiratory illnesses are especially susceptible to ozone's effects. Ozone also damages trees, agricultural crops and other plants.

Where Does Ozone Come From?

Ozone is not emitted directly by pollution sources. Instead, ozone is formed through complex chemical reactions between hydrocarbons and nitrogen oxides, in the presence of heat and sunlight. The main sources of these ozone precursors are motor vehicles, industrial processes, solvents, paints and household products. Emissions of these pollutants throughout the Bay Area contribute to form ozone, and emissions in one part of the region can impact air quality many miles away. Efforts to reduce ozone levels focus on reducing emissions of these precursor pollutants. Ozone levels are usually highest on hot, windless summer afternoons, especially in inland valleys.

What are Ozone Conditions in the Bay Area?

Ozone conditions in the Bay Area have improved significantly over the years. Ambient concentrations and the number of days on which the region experiences unhealthy ozone levels have fallen dramatically. This improvement is largely due to cleaner motor vehicles and fuels, as well as reduced emissions from industrial and commercial sources. More progress is needed, however, to ensure healthy air quality every day.

What is Being Done to Reduce Ozone in the Bay Area?

The State and federal governments have established health-based air quality standards for ozone. The State standard is more stringent. The Bay Area currently exceeds the State and national standards for a few hours on one or more summer days each year. The Air District, in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments, prepares and implements plans to achieve the ozone standards. The most recent plan for the State standard is the *2000 Clean Air Plan*, and the most recent plan for the national standard is the *2001 Ozone Attainment Plan*. Each plan includes measures to reduce emissions of ozone precursors from a variety of sources, including industrial facilities, commercial processes, motor vehicles, other transportation sources, and consumer products. Each document is being updated in 2003/04. For more information on efforts to reduce ozone levels in the Bay Area, visit the BAAQMD website at: <http://www.baaqmd.gov/planning/cap/aqp.htm> or contact Henry Hilken at (415) 749-4642 or hhilken@baaqmd.gov.